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BROADCOM CORPORATION

UNITED STATES DISTRICT COURT

FOR THE CENTRAL DISTRICT OF CALIFORNIA

SOUTHERN DIVISION

BROADCOM CORPORATION, Plaintiff, v. FUNAI ELECTRIC COMPANY, LTD.; FUNAI CORPORATION, INC.; and P&F USA, INC., Defendants.	Case No. 17 Civ. 403 COMPLAINT FOR PATENT INFRINGEMENT **DEMAND FOR JURY TRIAL**

Plaintiff Broadcom Corporation ("Broadcom"), by and through its undersigned counsel, files this Complaint for Patent Infringement relating to several U.S. patents as identified below (collectively, the "Patents-in-Suit") and alleges as follows:

THE PARTIES

1. Plaintiff Broadcom Corporation ("Broadcom" or "Plaintiff") is a California corporation having its principal place of business at 5300 California Avenue, Irvine, CA 92617. It was acquired by Avago Technologies, Ltd. in 2016

and currently operates as a wholly-owned subsidiary of the merged entity now known as Broadcom Limited.

2. Funai Electric Company, Ltd. ("Funai Japan") is a corporation organized under the laws of Japan with its principal place of business at 7-7-1 Nakagaito, Daito City, Osaka 574-0013, Japan.

3. Funai Corporation, Inc. ("Funai USA") is a corporation organized under the laws of New Jersey with its principal place of business at 201 Route 17 North, Suite 903, Rutherford, NJ 07070. On information and belief, Funai USA is a wholly owned subsidiary of Funai Japan engaged in sales of electrical equipment.

4. P&F USA, Inc. ("P&F") is a corporation organized under the laws of Georgia with its principal place of business at 2555 Marconi Drive, Suite 300, Alpharetta, GA 30005. On information and belief, P&F is a wholly owned subsidiary of Funai Japan engaged in sales of electrical equipment.

JURISDICTION AND VENUE

5. Broadcom brings this civil action for patent infringement pursuant to the Patent Laws of the United States, 35 U.S.C. § 1, *et. seq.*, including 35 U.S.C. §§ 271, 281-285. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338.

6. Upon information and belief, Defendants Funai Japan, Ltd., Funai USA, and P&F (collectively, "Funai" or "Defendants") transact and conduct business in this District and the State of California, and are subject to the personal jurisdiction of this Court. Upon information and belief, Funai has minimum contacts within the State of California and this District and has purposefully availed itself of the privileges of conducting business in the State of California and in this District. Broadcom's causes of action arise directly from Funai's business contacts and other activities in the State of California and in this District. Upon information and belief, Funai has committed acts of infringement, both directly and indirectly, within this District and the State of California by, *inter alia*, using, selling, offering

for sale, importing, advertising, and/or promoting products that infringe one or more claims of the Patents-in-Suit. More specifically, Funai, directly and/or through intermediaries, uses, sells, ships, distributes, offers for sale, advertises, and otherwise promotes its products in the United States, the State of California, and this District. Upon information and belief, Funai solicits customers in the State of California and this District, and has customers who are residents of the State of California and this District and who use Funai's products in the State of California and in this District.

7. Venue is proper in this district under 28 U.S.C. §§ 1391 and 1400(b).

THE PATENTS-IN-SUIT

8. Broadcom owns by assignment the entire right, title, and interest in U.S. Patent No. 8,284,844 (the "MacInnis '844 patent"), which is entitled "Video Decoding System Supporting Multiple Standards." The MacInnis '844 patent issued on October 9, 2012 to inventors Alexander MacInnis, Jose Alvarez, Sheng Zhong, Xiaodong Xie, and Vivian Hsiun from United States Patent Application No. 10/114,798, filed on April 1, 2002. A true and correct copy of the MacInnis '844 patent is attached as **Exhibit A** to this Complaint.

9. Broadcom owns by assignment the entire right, title, and interest in U.S. Patent No. 7,590,059 (the "Gordon '059 patent"), which is entitled "Multistandard Video Decoder." The Gordon '059 patent issued on September 15, 2009 to inventor Stephen Gordon from United States Patent Application No. 11/000,731, filed on December 1, 2004. A true and correct copy of the Gordon '059 patent is attached as **Exhibit B** to this Complaint.

10. Broadcom owns by assignment the entire right, title, and interest in U.S. Patent No. 8,068,171 (the "Aggarwal '171 patent"), which is entitled "High Speed for Digital Video." The Aggarwal '171 patent issued on November 29, 2011 to inventors Gaurav Aggarwal, M K Subramanian, Sandeep Bhatia, Santosh Savekar, and K Shivapirakasan from United States Patent Application

No. 12/730,911, filed on March 24, 2010. A true and correct copy of the Aggarwal '171 patent is attached as **Exhibit C** to this Complaint.

11. Broadcom owns by assignment the entire right, title, and interest in U.S. Patent No. 7,310,104 (the "MacInnis '104 patent"), which is entitled "Graphics Display System with Anti-Flutter Filtering and Vertical Scaling." The MacInnis '104 patent issued on December 18, 2007 to inventors Alexander MacInnis, Chengfuh Jeffrey Tang, Xiaodong Xie, James Patterson, and Greg Kranawetter from United States Patent Application No. 11/511,042, filed on August 28, 2006. A true and correct copy of the MacInnis '104 patent is attached as **Exhibit D** to this Complaint.

BACKGROUND

12. Founded by Henry Samueli and Henry Nicholas in 1991 in Los Angeles, California, Broadcom has grown to be a global leader in the semiconductor industry. Broadcom provides one of the industry's broadest portfolios of highly-integrated SoCs that seamlessly deliver voice, video, data and multimedia connectivity in the home, office and mobile environments. From its headquarters in Irvine, California, Broadcom has expanded its footprint across the United States and around the world, employing thousands of individuals globally and in the United States. A brief overview of Broadcom's history can be found on its website at: https://www.broadcom.com/company/about-us/company-history/.

13. Broadcom's continued success depends in substantial part upon its constant attention to research and development. From 2015 to 2016, Broadcom spent $3.7 billion on research and development for its products. $2.7 billion of this $3.7 billion was spent in 2016 alone. **Exhibit E** (Broadcom Limited 2016 Form 10-K), at 47. Prior to its acquisition, Broadcom Corporation's research and development expense was $2.37 billion, $2.49 billion and $2.32 billion in 2014, 2013, and 2012, respectively. **Exhibit F** (Broadcom Limited 2014 Form 10-K), at 6.

14. Broadcom relies on the patent system as an important part of its intellectual property program to protect the valuable technology and inventions resulting from this research and development. As of October 30, 2016, Broadcom Limited had approximately 27,640 U.S. and other patents and approximately 3,020 U.S. and other pending patent applications. Broadcom Limited's research and development efforts are presently resulting in approximately 350 new patent applications per year. **Exhibit E** (Broadcom Limited 2016 Form 10-K), at 8.

15. The Accused Products are generally semiconductor components (such as, for example, various system on a chip ("SoC") and similar processing components and circuits) and consumer audiovisual products incorporating such SoCs, including, without limitation, digital televisions ("DTVs"), set-top boxes, Blu-ray disc players, DVD players/recorders, DTV/DVD combinations, DTV/Blu-Ray combinations, multimedia streaming players, home theater systems, and other similar audiovisual devices and systems imported, marketed and/or sold by Defendants in the United States.

16. On information and belief, Defendants directly infringe, induce infringement of, and contributorily infringe the Patents-In-Suit by making, using, selling, offering for sale, and importing articles, including consumer audiovisual products that incorporate the SoCs manufactured and/or sold by at least Mstar Semiconductor Inc., which are covered by the claims of the Patents-In-Suit.

17. On information and belief, in addition to the televisions incorporating the specific SoCs listed below in Count 1-4, any consumer audiovisual products of Funai that incorporate any processing components and circuits that feature the same or substantially similar infringing functionality, infringe the Patents-In-Suit.

COUNT 1

(Infringement of the MacInnis '844 Patent)

18. Broadcom incorporates by reference each and every allegation in the preceding paragraphs.

19. Defendants are making, using, offering to sell, selling, and/or importing into the United States products that infringe at least claim 1 of the MacInnis '844 patent, including but not limited to the following products:

- Magnavox 50" Class Smart LED TV 50MV376Y/F7 (incorporates MStar ARM MSD95M2D-3-004E ATHC353B 1617A)

20. Defendants have had actual knowledge of the MacInnis '844 patent since at least as of the date they were served with this Complaint, and at least since that date have had actual knowledge that one or more of their products infringes one or more claims of the MacInnis '844 patent.

21. On information and belief, Defendants have induced and will continue to induce the infringement of at least one claim of the MacInnis '844 patent, in violation of 35 U.S.C. § 271(b), by, among other things, actively and knowingly aiding and abetting others (including Defendants' sales and service subsidiaries, Defendants' authorized dealers and repair service providers, manufacturers who incorporate Defendants' products into downstream consumer products, retailers of downstream consumer products that incorporate Defendants' products, and consumers and end users) to infringe the MacInnis '844 patent with the specific intent to encourage their infringement, through activities such as marketing Defendants' products, creating and/or distributing drivers, data sheets, application notes, and/or similar materials with instructions on using or rendering operable downstream consumer products that incorporate Defendants' products.

22. On information and belief, the Defendants contribute to the infringement of one or more claims of the MacInnis '844 patent, in violation of 35 U.S.C. § 271(c), by, among others, end users, because they know that the Accused Products – and, specifically, their above-mentioned products that incorporate the accused SoCs – embody a material part of the claimed inventions of the MacInnis '844 patent, that they are specially made or specially adapted for use in an

infringement of the claims, and that they are not staple articles of commerce suitable for substantial non-infringing use.

23. On information and belief, Defendants' past and continuing infringement has been deliberate and willful, and this case is therefore an exceptional case, which warrants an award of treble damages and attorneys' fees to Plaintiff pursuant to 35 U.S.C. § 285. After receiving actual knowledge of the MacInnis '844 patent, Defendants have continued to make, use, sell, offer for sale, and/or import infringing products into the United States despite knowing that there was an objectively high likelihood of infringement of the MacInnis '844 patent. To the extent Defendants did not know of the objectively high likelihood of infringement, it was so obvious that it should have been known to Defendants.

24. The infringement of the MacInnis '844 patent by Defendants will continue unless enjoined by this Court.

25. The infringing activities by Defendants have caused and will continue to cause irreparable injury to Broadcom for which there exists no adequate remedy at law.

COUNT 2

(Infringement of the Gordon '059 Patent)

26. Broadcom incorporates by reference each and every allegation in the preceding paragraphs.

27. Defendants are making, using, offering to sell, selling, and/or importing into the United States products that infringe at least claims 11 and 21 of the Gordon '059 patent, including but not limited to the following products:

- Magnavox 50" Class Smart LED TV 50MV376Y/F7 (incorporates MStar ARM MSD95M2D-3-004E ATHC353B 1617A)

28. Defendants have had actual knowledge of the Gordon '059 patent since at least as of the date they were served with this Complaint, and at least since that

date have had actual knowledge that one or more of their products infringes one or more claims of the Gordon '059 patent.

29. On information and belief, Defendants have induced and will continue to induce the infringement of at least one claim of the Gordon '059 patent, in violation of 35 U.S.C. § 271(b), by, among other things, actively and knowingly aiding and abetting others (including Defendants' sales and service subsidiaries, Defendants' authorized dealers and repair service providers, manufacturers who incorporate Defendants' products into downstream consumer products, retailers of downstream consumer products that incorporate Defendants' products, and consumers and end users) to infringe the Gordon '059 patent with the specific intent to encourage their infringement, through activities such as marketing Defendants' products, creating and/or distributing drivers, data sheets, application notes, and/or similar materials with instructions on using or rendering operable downstream consumer products that incorporate Defendants' products.

30. On information and belief, the Defendants contribute to the infringement of one or more claims of the Gordon '059 patent, in violation of 35 U.S.C. § 271(c), by, among others, end users, because they know that the Accused Products – and, specifically, their above-mentioned products that incorporate the accused SoCs – embody a material part of the claimed inventions of the Gordon '059 patent, that they are specially made or specially adapted for use in an infringement of the claims, and that they are not staple articles of commerce suitable for substantial non-infringing use.

31. On information and belief, Defendants' past and continuing infringement has been deliberate and willful, and this case is therefore an exceptional case, which warrants an award of treble damages and attorneys' fees to Plaintiff pursuant to 35 U.S.C. § 285. After receiving actual knowledge of the Gordon '059 patent, Defendants have continued to make, use, sell, offer for sale, and/or import infringing products into the United States despite knowing that there

was an objectively high likelihood of infringement of the Gordon '059 patent. To the extent Defendants did not know of the objectively high likelihood of infringement, it was so obvious that it should have been known to Defendants.

32. The infringement of the Gordon '059 patent by Defendants will continue unless enjoined by this Court.

33. The infringing activities by Defendants have caused and will continue to cause irreparable injury to Broadcom for which there exists no adequate remedy at law.

COUNT 3

(Infringement of the Aggarwal '171 Patent)

34. Broadcom incorporates by reference each and every allegation in the preceding paragraphs.

35. Defendants are making, using, offering to sell, selling, and/or importing into the United States products that infringe at least claims 1, 6, and 7 of the Aggarwal '171 patent, including but not limited to the following products:

- Magnavox 50" Class Smart LED TV 50MV376Y/F7 (incorporates MStar ARM MSD95M2D-3-004E ATHC353B 1617A)

36. Defendants have had actual knowledge of the Aggarwal '171 patent since at least as of the date they were served with this Complaint, and at least since that date have had actual knowledge that one or more of their products infringes one or more claims of the Aggarwal '171 patent.

37. On information and belief, Defendants have induced and will continue to induce the infringement of at least one claim of the Aggarwal '171 patent, in violation of 35 U.S.C. § 271(b), by, among other things, actively and knowingly aiding and abetting others (including Defendants' sales and service subsidiaries, Defendants' authorized dealers and repair service providers, manufacturers who incorporate Defendants' products into downstream consumer products, retailers of downstream consumer products that incorporate Defendants' products, and

consumers and end users) to infringe the Aggarwal '171 patent with the specific intent to encourage their infringement, through activities such as marketing Defendants' products, creating and/or distributing drivers, data sheets, application notes, and/or similar materials with instructions on using or rendering operable downstream consumer products that incorporate Defendants' products.

38. On information and belief, the Defendants contribute to the infringement of one or more claims of the Aggarwal '171 patent, in violation of 35 U.S.C. § 271(c), by, among others, end users, because they know that the Accused Products – and, specifically, their above-mentioned products that incorporate the accused SoCs – embody a material part of the claimed inventions of the Aggarwal '171 patent, that they are specially made or specially adapted for use in an infringement of the claims, and that they are not staple articles of commerce suitable for substantial non-infringing use.

39. On information and belief, Defendants' past and continuing infringement has been deliberate and willful, and this case is therefore an exceptional case, which warrants an award of treble damages and attorneys' fees to Plaintiff pursuant to 35 U.S.C. § 285. After receiving actual knowledge of the Aggarwal '171 patent, Defendants have continued to make, use, sell, offer for sale, and/or import infringing products into the United States despite knowing that there was an objectively high likelihood of infringement of the Aggarwal '171 patent. To the extent Defendants did not know of the objectively high likelihood of infringement, it was so obvious that it should have been known to Defendants.

40. The infringement of the Aggarwal '171 patent by Defendants will continue unless enjoined by this Court.

41. The infringing activities by Defendants have caused and will continue to cause irreparable injury to Broadcom for which there exists no adequate remedy at law.

COUNT 4

(Infringement of the MacInnis '104 Patent)

42. Broadcom incorporates by reference each and every allegation in the preceding paragraphs.

43. Defendants are making, using, offering to sell, selling, and/or importing into the United States products that infringe at least claims 1, 11, and 17 of the MacInnis '104 patent, including but not limited to the following products:

- Magnavox 50" Class Smart LED TV 50MV376Y/F7 (incorporates MStar ARM MSD95M2D-3-004E ATHC353B 1617A)

44. Defendants have had actual knowledge of the MacInnis '104 patent since at least as of the date they were served with this Complaint, and at least since that date have had actual knowledge that one or more of their products infringes one or more claims of the MacInnis '104 patent.

45. On information and belief, Defendants have induced and will continue to induce the infringement of at least one claim of the MacInnis '104 patent, in violation of 35 U.S.C. § 271(b), by, among other things, actively and knowingly aiding and abetting others (including Defendants' sales and service subsidiaries, Defendants' authorized dealers and repair service providers, manufacturers who incorporate Defendants' products into downstream consumer products, retailers of downstream consumer products that incorporate Defendants' products, and consumers and end users) to infringe the MacInnis '104 patent with the specific intent to encourage their infringement, through activities such as marketing Defendants' products, creating and/or distributing drivers, data sheets, application notes, and/or similar materials with instructions on using or rendering operable downstream consumer products that incorporate Defendants' products.

46. On information and belief, the Defendants contribute to the infringement of one or more claims of the MacInnis '104 patent, in violation of 35 U.S.C. § 271(c), by, among others, end users, because they know that the Accused

Products – and, specifically, their above-mentioned products that incorporate the accused SoCs – embody a material part of the claimed inventions of the MacInnis '104 patent, that they are specially made or specially adapted for use in an infringement of the claims, and that they are not staple articles of commerce suitable for substantial non-infringing use.

47. On information and belief, Defendants' past and continuing infringement has been deliberate and willful, and this case is therefore an exceptional case, which warrants an award of treble damages and attorneys' fees to Plaintiff pursuant to 35 U.S.C. § 285. After receiving actual knowledge of the MacInnis '104 patent, Defendants have continued to make, use, sell, offer for sale, and/or import infringing products into the United States despite knowing that there was an objectively high likelihood of infringement of the MacInnis '104 patent. To the extent Defendants did not know of the objectively high likelihood of infringement, it was so obvious that it should have been known to Defendants.

48. The infringement of the MacInnis '104 patent by Defendants will continue unless enjoined by this Court.

49. The infringing activities by Defendants have caused and will continue to cause irreparable injury to Broadcom for which there exists no adequate remedy at law.

PRAYER FOR RELIEF

50. WHEREFORE, Broadcom requests that judgment be entered in its favor and against Defendants as follows:

A. Entering judgment declaring that Defendants have infringed, directly and/or indirectly, literally and/or under the doctrine of equivalents, the Patents-in-Suit in violation of 35 U.S.C. § 271;

B. Issuing preliminary and permanent injunctions enjoining Defendants, their officers, agents, subsidiaries and employees, and those in privity or in active concert with them, from further activities that constitute infringement of the Patents-in-Suit, within the State of California and across the United States;

C. Declaring that Defendants' infringement of the Patents-in-Suit is willful and deliberate pursuant to 35 U.S.C. § 284;

D. Ordering that Broadcom be awarded damages in an amount no less than a reasonable royalty for each asserted patent arising out of Defendants' infringement of the Patents-in-Suit, together with costs, and pre- and post-judgment interest;

E. Declaring this an exceptional case under 35 U.S.C. § 285 and awarding attorneys' fees and trebling of damages; and

F. Awarding Broadcom such other costs and further relief as the Court deems just and proper.

DEMAND FOR JURY TRIAL

51. Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Broadcom demands a trial by jury on all issues so triable.

DATED: March 7, 2017

Respectfully submitted,

By: */s/ Laurie Edelstein*

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